

STATE OF MINNESOTA
OFFICE OF ADMINISTRATIVE HEARINGS
FOR THE MINNESOTA DEPARTMENT OF NATURAL RESOURCES

In the Matter of the Application of
Charles G. Born to Modify the Outlet of
Willis Lake, Waseca County

**FINDINGS OF FACT,
CONCLUSIONS AND
RECOMMENDATION**

The above-entitled matter came on for hearing before Administrative Law Judge Richard C. Luis on April 15, 16, and 23, 1996, in the Janesville Fire Barn, Janesville, Minnesota. The record in this matter closed on July 22, 1996.

Kurt A. Deter and Gerald W. Von Korff, Rinke-Noonan Law Firm, 700 Norwest Center, St. Cloud, Minnesota 56302, appeared on behalf of Charles G. Born (Applicant). Matthew B. Seltzer, Assistant Attorney General, Suite 990, 445 Minnesota Street, St. Paul, Minnesota 55101-2127, appeared on behalf of the Department of Natural Resources (DNR). Larry Collins, Waseca County Attorney, County Courthouse, Waseca, Minnesota 56093, appeared on behalf of the Waseca County Soil and Water Conservation District (County).

Notice is hereby given that, pursuant to Minn. Stat. § 14.61, the final decision of the Commissioner of Natural Resources shall not be made until this Report has been made available to the parties to the proceeding for at least ten days, and an opportunity has been afforded to each party adversely affected to file exceptions and present argument to the Commissioner. Exceptions to this Report, if any, shall be filed with Commissioner Rodney W. Sando, 600 DNR Building, 500 Lafayette Road, St. Paul, Minnesota 55155.

STATEMENT OF ISSUE

Has the Applicant met all of the conditions required for the grant of a permit to modify the tile outlet which serves as the water level control for Willis Lake?

Based upon the foregoing Findings of Fact, the Administrative Law Judge makes the following:

FINDINGS OF FACT

Background

1. Willis Lake (designated as Lake No. 81-91) is a wetland with a meandered area of approximately 116 acres. It is located in northwest Waseca County, in Section 9, Township 108, Range 24 West. The lake was named after an early settler in the region. Public Exhibit 2, at 612-613. Surrounding the lake are two

farms, one owned by the Strohl family to the northwest and the other owned by the Born family to the southeast. Approximately one-quarter to one-half mile to the east and southeast is a much larger body of water, Lake Elysian. The land rises naturally to the north, south, and west of Willis Lake (a/k/a Lake Willis). The first evidence of the historical recognition of Willis Lake is a map drawn in 1854, which shows Willis Lake, bordered on the east by a marsh. DNR Exhibit 24. The same map shows an oval marsh occupying the land to the east of Willis Lake running south to Lake Elysian. *Id.*

2. Before World War I, two tile lines were installed leading into Willis Lake to drain adjacent fields. Strohl Testimony. County Road 18, a road built originally for horse-drawn traffic, runs along the eastern side of Willis Lake. Up to 1927, County Road 18 (hereinafter "Old County 18") generally ran along a north-south line, but at one point it extended in an arc about 150 feet to the east of the current County Road 18 (hereinafter "New County 18"), passing the easternmost point of Willis Lake. The arc of Old County 18 followed roughly the approximate east meander line of Willis Lake. See Joint Exhibit 3 and DNR Exhibit 24. New County 18 (see Finding 4) runs through the meandered area of the lake.

3. In 1919, the water level of Lake Willis was extremely low. The Strohl and Born families took advantage of this situation to install a line of drainage tile in the eastern bed of the lake. The tile line ran easterly toward Old County 18 and followed a culvert that had been installed across Old County 18 under the roadbed (at a point identified in the testimony as "the old stone bridge") when that road had been constructed. Born Exhibit 8; Strohl Testimony. The tile line then turned southeasterly and extended down to the edge of Lake Elysian. The tile line followed an existing watercourse through the adjacent field (formerly the marsh) between Willis Lake and Lake Elysian. Strohl Testimony. The marsh extends for approximately one-half of a mile and occupies the low land between Willis Lake and Lake Elysian. Charles Born (father of the Applicant) installed a sump pump to move the water collected there over a ridge and into Lake Elysian. The ridge adjacent to Lake Elysian has an elevation of 1025.9. DNR Exhibit 37.

4. As a result of the installed tile line, the water level of Willis Lake was lowered substantially and the adjacent marsh was effectively drained. In 1927, Old County 18 was replaced by New County 18. New County 18 ran directly north and south between the rises of land on those sides of Willis Lake. New County 18 was straight, and ran across the base of the arc left by Old County 18 to the east side of Willis Lake. It is routed inside the meander lines of the lake (following the quarter section line). Born Exhibit 8. Substantial amounts of fill were used in the construction of New County 18 to create a level road bed. The top of the road surface was built with an elevation of 1025.0 at the location of a cattle pass running under the roadbed. Joint Exhibit 3. The cattle pass is approximately four feet high with an elevation on the west floor of 1016.8, on the east floor of 1017.4, and the lowest point of the top of the cattle pass at 1022.8. Joint Exhibit 3. After the construction of New County 18, the land occupied by Old County 18 was "farmed down," or converted to cultivated farmland. Strohl Testimony.

5. In August, 1938 the Willis Lake basin was substantially dry, with only a few small areas of open water and aquatic vegetation on the middle of the lake bed. Born Exhibit 7. An aerial photograph taken of Willis Lake shows a scattering of trees growing

in area directly south of the lake, coming up to a stain line which extends around the Willis Lake basin. A thickly forested area is present to the southeast of the lake, reaching to the edge of New County 18. The contour followed by the stain line is at a lower elevation than the trees to the southeast of Willis Lake.

6. On September 17, 1947 the DNR surveyed Willis Lake to determine if the area could be made suitable for duck habitat. The survey noted that Willis Lake had a maximum depth of 3 feet and an average depth of 1.5 feet. DNR Exhibit 62, Attachment 2. Scattered woods were observed to the south and southwest. *Id.* The survey also stated:

In natural state, no outlet or inlet. At present a drainage tile 22 inches in diameter drains the area into Lake Elysian at the east end.

* * *

In its present state most of the area is not being utilized for agriculture. Only the east end of the bottom land and a small portion of the shoreline is being pastured. The remainder of the area is a cat-tail marsh which is too wet for pasture and too dry for good duck or muskrat habitat.

Id.

7. In July, 1951 an aerial photograph was taken of Willis Lake. This photograph shows conditions similar to those described in the 1947 survey and that appear on the 1938 aerial photograph. DNR Exhibits 19 and 20. A stain line in the same position from the 1938 photograph appears in the 1951 photograph. Fewer trees are visible in the area directly south of the lake.

8. In June, 1964 an aerial photograph was taken of Willis Lake. The photograph shows a water level slightly higher than in the 1951 photograph. DNR Exhibit 21. The area that contained the trees directly south of Willis Lake is dry, but no trees are present. The stain line present in the 1938 and 1951 photographs remains visible.

9. In 1966, a neighboring landowner complained to the DNR that Willis Lake was being drained by pumping. DNR Exhibit 36. On September 8, 1966, the DNR surveyed Willis Lake and reported that the tile line was functional and the lake was "drained at present." DNR Exhibit 37. The surveyor concluded that, with an apparent outlet of 1025.8 and a small watershed, "it is doubtful if Willis Lake ever did outlet." *Id.* The "outlet" elevation determined by the surveyor appears to be the rise where Old County 18 had been. There is no evidence that the surveyor was aware that Old County 18 had been sited through the area identified by him as the outlet level, or that a culvert had been installed under Old County 18. In late 1966, the DNR installed a weir across the west side of the cattle pass to prevent the movement of water out of Willis Lake. The effective outlet elevation to be left by the weir was to be 1021.0. DNR Exhibit 38. Mr. Born, through his attorney at that time, Lawrence Gallagher, attempted without success to persuade the Department not to take that action.

10. In July, 1971 an aerial photograph was taken of Willis Lake. The water level in the lake is higher than in any of the prior photographs. DNR Exhibits 22-23. The

boundary of the water in the Willis Lake basin is consistent with the stain line shown in the 1938 photograph. Aquatic vegetation is visible through the central portion of the lake and open water appears in southern, central, and western portions of the lake.

11. In 1972, the Waseca County Highway Department uncovered and removed a section of 15 inch tile while excavating for a culvert extension. DNR Exhibit 40. The DNR believed that the tile line had been rendered ineffective by the 1966 weir. *Id.* In a July 25, 1972 letter to Attorney Gallagher, the DNR denied the request made on behalf of the Borns that the tile line be restored. DNR Exhibit 41.

12. In May, 1973 Ray Nyberg of the DNR staff indicated that the level of Willis Lake was "getting progressively worse and is now very low with much of the bottom exposed. I feel this lake will be lost unless the excess outflow is stopped." DNR Exhibit 42. The condition of the lake had led DNR staff to the conclusion that the 1966 weir had not prevented drainage from the 1919 tile line. Emergency action was authorized by the DNR on June 5, 1973, to plug the tile line with concrete, to construct a sheet-piling dam in front of the concrete plugging the tile and to backfill the area around the tile with clay. DNR Exhibit 43. The work order indicated that no permit is needed because the road is on lakebed. *Id.* The work was carried out soon afterward. The elevation at the top of the sheet-piling dam is 1022.89. DNR Exhibit 44.

13. In 1977, an aerial photograph was taken of Willis Lake. The photograph shows open water through the central portion of the lake and aquatic vegetation on the eastern side and along the entire shoreline of the lake. DNR Exhibit 62, Attachment 1. The boundary of the water level is nearly identical to the staining shown in the 1938 photograph. The water narrows toward the easternmost portion of the lake, stopping before the cattle pass in New County 18.

14. In 1993, the water level of Willis Lake overtopped New County 18 and threatened to overtop the ridge where Old County 18 had been located. Charles G. Born added fill to the top of the ridge at that time to prevent the flooding of his field beyond that ridge (the former marsh between Willis Lake and Lake Elysian). The additional fill raised the top of the grade of Old County 18 to an elevation of 1027.3. DNR Exhibits 45 and 47. The Waseca County Highway Department applied for a permit that year to lower the water level of Willis Lake to 1022.2, in order to prevent additional, future flooding of the road. DNR Exhibit 46.

15. The DNR surveyed Willis Lake on July 26, 1993. The elevation of the water surface was 1026.6, which is the highest level recorded. DNR Exhibit 44. The survey characterized the lake as landlocked and relied upon the elevation of trees to determine an Ordinary High Water Level (OHWL) of 1023.7. *Id.*

16. On October 1, 1993 the DNR approved the application of the Waseca County Highway Department to install an outlet pipe at 1022.2. The pipe was installed soon after. The water level of Willis Lake has remained below the level of the roadway since the outlet pipe was installed. The elevation of the top of the road at the cattle pass is 1025.9. Joint Exhibit 9; DNR Exhibit 46.

17. On August 14, 1995 Charles G. Born applied for a permit from the DNR to "restore natural outlet to Willis Lake, returning it to the level established by the

Commissioner of Conservation in 1939-1940.” DNR Exhibit 48. Leo Getsfried, Area Hydrologist for the DNR, requested additional information on September 1, 1995, to review the application. DNR Exhibit 51. In response, Born submitted a letter clarifying that the application was sought for the following purpose:

Our plans are to re-open, or if that is not possible re-establish the tile outlet for Lake Willis to the level established by the Commissioner of Conservation in 1939-1940. That level would be 1016.5. The present 18” PVC [polyvinyl chloride pipe] installed by Waseca County would be used as far as it goes and would be extended to make it possible to reach the 1016.5 level. In extending the pipe we will be working with Waseca County, they too wish to see the water reestablished to its intended level so that water is removed from the road right of way.

DNR Exhibit 52.

18. Due to prior discussions about lowering the water level in Willis Lake, DNR conducted a visit to the lake and an analysis of the likely effect of lowering the level of water in Willis Lake to 1016.5. DNR Exhibit 62. Regarding the condition of Willis Lake, the DNR surveyor identified the lake depth at 7 to 7.5 feet and noted that “several consecutive years of above-normal precipitation would seem to have contributed to the current open condition of Willis Lake.” DNR Exhibit 62, at 1. The Department analysis suggested that lowering the surface water of the lake to 1016.5 would render the lake too shallow to support fish and would reduce wetland area to less than 32 acres. *Id.* at 1-2. The reduced water level would result in a depth of 1.5 feet with little open water area. *Id.* at 2. Regarding wildlife habitat, the analysis states, in part:

Willis Lake is subject to fluctuations in water levels coinciding with wet and dry periods. During wet periods, areas of open water increase, and remain until the marsh is dry again. During dry periods, water levels drop and wetland vegetation recovers. Several consecutive years of above-normal precipitation would seem to have contributed to the current open condition of Willis Lake. We expect emergent vegetation should return with the next drought, as seen in the 1977 aerial photograph.

. . .

DNR Exhibit 62 at 1 and Attachment 1 (1977 Aerial Photograph).

19. A field report was prepared by Mr. Getsfried in response to the permit application. DNR Exhibit 53. The report cited the 1993 survey as concluding that “the lake was essentially landlocked in 1966 and is presently landlocked.” *Id.* at 1. The history of the lake since the installation of a tile line in 1919 is recounted in the report. The input of the Fisheries section of the Department was related as being “not in favor of draining water bodies.” *Id.* at 2. Getsfried notes that the Assistant Section Manager of Fisheries (Christie Nixon) believes that the reduction (to 1016.5) would “eliminate any future potential use of this basin as a fish spawning or rearing area.” *Id.*

20. On April 3, 1996 the Army Corps of Engineers indicated that receipt of a permit from the DNR is required before the proposed work can be authorized by the Corps. DNR Ex. 57.

21. On October 19, 1995 the Waseca County Soil and Water Conservation District Board (SWCD) recommended denial of the permit due to the anticipated reduction of the water level by five feet (as the Board understood the Application). DNR Exhibit 54.

22. On October 27, 1995 the Department denied the application for a permit. In its letter explaining the denial, the Department cited Minn. Rule 6115.0221 A(2) as controlling. DNR Exhibit 55. That rule prohibits reduction of the control elevation of landlocked lakes below one and one half feet below the ordinary high water mark. The letter related that the existing runout was already set at the minimum level based on the permit obtained by the Waseca County Highway Department. This appeal followed.

Based upon the foregoing Findings of Fact, the Administrative Law Judge makes the following:

CONCLUSIONS

1. Any of the foregoing Findings of Fact more appropriately considered Legal Conclusions are hereby adopted as such.

2. The Administrative Law Judge and the Commissioner of Natural Resources have jurisdiction over the permit application herein pursuant to Minn. Stat. §§ 14.50, 103 G.311, and 103 G.315.

3. All relevant substantive and procedural requirements of law and rule have been fulfilled. The permit Applicant bears the burden of proof in this matter by a preponderance of the evidence.

4. Willis Lake is a public water as that term is used in Minn. Stat. Ch. 103G.

5. The natural ordinary high water level of Willis Lake is below the 1023.7 foot OHWL used by the Department to deny the permit application of Charles Born.

6. Willis Lake was not landlocked naturally, but has taken on characteristics of being landlocked through artificial changes in the natural topography in its vicinity.

7. The proposed establishment of an outlet for Willis Lake at the level of 1016.5 does not conform the lake to a condition reasonably consistent with natural conditions and would be detrimental to significant fish and wildlife habitat and protected vegetation.

8. The natural ordinary high water level for Willis Lake reaches to the level shown by the staining on the 1938 aerial photograph of the lake. Establishing an outlet for Willis Lake at that level would return Willis Lake to essentially its natural state. Establishing an outlet for Willis Lake at that level reduces the utility of the lake for fish spawning but this impact is outweighed by the re-establishment of suitable habitat for waterfowl and muskrats in the lake. Reduction of the outlet level to the level of staining on the 1938 photograph meets the standards of Minn. Rules 6115.0220 and 6115.0221A.

9. The establishment of an outlet at a level derived from a survey to determine the stain level will not "materially adversely affect the environment" within the meaning of Minn. Stat. § 116B.02, subd. 5 (1994). Therefore, it will not cause "pollution, impairment or destruction" of natural resources within the meaning of Minn. Stat. § 116D.04, subd. 6.

10. The proposed project, as modified in accordance with the Findings and Conclusions of this Report, is reasonable, practical, and will adequately protect public safety and promote the public welfare within the meaning of Minn. Stat. § 103G.315, subd. 3, and complies with all other applicable statutes and rules.

Based upon the foregoing Conclusions, the Administrative Law Judge makes the following:

RECOMMENDATION

IT IS RECOMMENDED that the Commissioner of Natural Resources issue a permit to construct an outlet at the elevation at which a natural stain line appeared on the landscape in the Willis Lake basin, as shown in the 1938 aerial photograph of that basin, that elevation to be determined by survey.

Dated this _____ of August, 1996.

RICHARD C. LUIS
Administrative Law Judge

Reported: Tape Recorded: (13 tapes)
No Transcript.

NOTICE

Pursuant to Minn. Stat. § 14.62, subd. 1, the Department is required to serve its final decision upon each party and the Administrative Law Judge by first class mail or as otherwise provided by law.

MEMORANDUM

There are two separate sets of standards which govern the Commissioner's decision on this permit application. The first set is contained in the State's water laws and the Department's rules. These are Minn. Stat. Ch. 103G and Minn. Rules Pt. 6115. The second set is contained in the Minnesota Environmental Rights Act and the Minnesota Environmental Policy Act, Minn. Stat. Chs. 116B and 116D. Any permit

application must meet both sets of standards before the Commissioner can grant that application.

1993 Determination of OHWL

John Scherek was the DNR surveyor who examined Willis Lake in 1993 to determine its OHWL. In his testimony at the hearing, Scherek expressed his belief that the evidence he relied upon for his OHWL conclusion (the stand of trees southeast of the lake) existed for a long period of time prior to 1993 and thus the evidence supports his conclusion that the OHWL of Willis Lake is 1023.7. He characterized that tree evidence as the "best evidence" of an OHWL. In this case, the Administrative Law Judge cannot agree.

Essentially, the evidence of trees to determine an OHWL relies upon the known characteristics of tree growth. If left unhindered, trees will spread to cover the available land. Since trees are terrestrial plants, not aquatic plants, the proximity of a body of water will check growth of trees in that direction. Over time, the trees will occupy the portion of shoreline that provides enough elevation to protect the trees' root systems from the adverse effects of water. DNR Exhibit 59, at 2-3. The distance from the base of the tree to the OHWL is either a full or half diameter of the tree, measured at 4.5 feet up from the base of the tree. *Id.* at 3. Whether a full or half diameter is used is determined by the species of tree, since some tolerate water better than others. DNR Exhibit 59. If trees have grown in the basin during a period of low water, the return of the water level to the OHWL will kill those trees.

There is no question that the stand of trees Scherek used to determine the OHWL has been present at Willis Lake for a considerable time. Those trees appear on aerial photographs of the lake in the same location in 1938, 1951, 1964 and 1977. Born Exhibit 7, DNR Exhibits 17-23, and DNR Exhibit 62, Attachment 1. What has not been at the same location over that lengthy period of time is water from Willis Lake. The aerial photographs of the lake, testimony of every person familiar with the lake, correspondence to the DNR concerning the lake, the DNR's own reports regarding the condition of the lake, and the actions taken regarding the lake compel the conclusion that, prior to 1977, the water level of Willis Lake has always been substantially below the level identified as the OHWL in 1993.

The evidence in the record of lower water levels from prior to 1938 to at least 1977 is also supported by inferential evidence. Believing that Willis Lake was in danger of disappearing, the DNR in 1973 used concrete to block the 1919 tile line toward Lake Elysian. After this action, higher water levels were present in Willis Lake. The aerial photograph from 1977, identified as a drought year, shows large areas of open water in Willis Lake. DNR Exhibit 62, Attachment 1. This evidence demonstrates that the tile line had been effective in removing most of the water from Willis Lake from 1919 to 1973.

For a period of at least thirty-nine years (1938 to 1977) the tree line relied upon by Scherek and the water were a substantial distance apart. In theory, new trees

should have taken root and grown over that period toward the water, until stopped by the lowered water level. The trees have not done so. Scherek expressed his belief that the water has been substantially higher over that period, but cited no evidence other than the location of the trees to support that belief. The aerial photographs show that the tree line on the southeast corner of Willis Lake has remained in the same location. The record in this matter does not support using that tree evidence as an accurate measure of the OHWL.

From 1919 to 1973, Willis Lake was being drained by a tile system which resulted in water levels lower than would occur in a state of nature. From 1927 onward, the natural outlet of the lake, preserved until that time by the culvert left in Old County 18, was closed by the construction of New County 18. The decision to close that outlet likely was prompted by the utility of the land for farming and the fact that the tiling system acted to drain the lake to yet a lower level. The land between Lakes Willis and Elysian, formerly a marsh, is currently planted with a crop.

Support for the finding that an outlet existed for Willis Lake in the state of nature (prior to Old County 18) is found in the original map of the area, drafted in 1854. This map shows a marsh to the southeast of Willis Lake lying between Lake Elysian and Willis Lake. DNR Exhibit 24. That land is currently dry. The tiling running toward Lake Elysian terminates in a sump pump to move the water collected over a ridge into Lake Elysian.

The 1854 map showing the marsh does not indicate any direct connection between either Willis Lake or Lake Elysian. Although no direct connection between the marsh and Lake Willis is shown on the 1854 map, the lay of the land indicates that there is no obvious source of water to supply that marsh in a state of nature, except by natural drainage of water from Willis Lake. The existence of the ridge (at an elevation of 1025.9) between the marsh and Lake Elysian indicates that the source of the water is unlikely to have been Lake Elysian. The water level of Lake Elysian would have to have risen above 1025.9, and then the map would likely have shown that marsh to have been part of Lake Elysian.

With the separation of the marsh and Lake Elysian, the level of Willis Lake was determined by the amount of water flowing into the basin within the lake's meandered area, reduced by the water flowing out of the basin to supply the water contained in the adjacent marsh. These two wetlands (Willis Lake and the marsh) comprise the entire natural system for water flow off of the land surrounding Willis Lake and, from there, into the adjacent marsh. Willis Lake provided the water for the marsh through a connection. While that connection may not have been sufficiently established to appear on the 1854 map, by 1919, that connection was apparent to all as a watercourse.

Not being satisfied with the natural drainage out of Willis Lake, the adjacent landowners took advantage of the low water level in 1919 to install a tile system in Willis Lake. The tiles ran from the lake bed along the path of the watercourse to the culvert, through the culvert and down to the ridge near Lake Elysian. This tile had the effect of reducing the water level in Willis Lake to about two and one half feet and completely

drained the adjacent marsh. The drainage was so effective that Charles Born needed to insert barrel tops between some of the tiles to irrigate his own field (formerly the marsh) with water pumped from Lake Elysian. Blasing Testimony.

Additional inferential support for a natural outlet of Willis Lake lies in the ability of the Borns and Strohrs to install a tile line in the lake bed in 1919. The level of water in Willis Lake, even with an artificial outlet installed in 1993 at 1022.2, is deep enough to prevent tile installation, absent extraordinary efforts. The testimony of Joe Strohl was clear that the water level on Willis Lake in 1919 did not impede installation of the drainage tile. Such a low water level is unlikely where the OHWL of Willis Lake is 1023.7 and if the lake does not have a natural outlet (positions taken by the DNR). A permissible inference to be drawn from the low water level prior to the installation of the tile is that the OHWL of Willis Lake is somewhere below both 1023.7 and 1022.2. The undisputed testimony is that the route followed to install the 1919 tile followed an existing waterway. Whether that waterway was natural, ditched, or a combination of both, it is reasonable to conclude that a watercourse would not have been created within the meandered area of Willis Lake if the natural OHWL is 1023.7.

The presence of a waterway in the 1927 plans for New County 18 supports the conclusion that Willis Lake supplied naturally the water for the adjacent marsh. Born Exhibit 8. Currently, the slope from the ridge situated on the route of Old County 18 drops toward Willis Lake. If this slope existed naturally, the waterway would have to have flowed up the gradient on the Lake Elysian side of Old County 18, through the culvert and down into Willis Lake. There is no evidence that water levels on the southeast side of Old County 18 ever rose sufficiently to result in such a movement of water. Rather, it is concluded that the watercourse shown on the 1927 plan reflects the retention of an existing, natural connection between Willis Lake and the marsh, flowing east and then south out of Lake Willis, when Old County 18 was built. The Department maintains that the ridge at 1025.8 (at the location of Old County 18) is the natural outlet. The record indicates that this ridge is the result of road construction and is an artificially created elevation. In addition, it is reasonable to conclude that constructing a culvert under Old County 18 was done to abet the natural flow out of Lake Willis, which had been impeded by laying the road in the low land between Willis Lake and the marsh.

The effect of the tiling on water levels in Willis Lake and the adjacent marsh is demonstrated in the aerial photograph from 1938. Only a few small areas of open water are present. Aquatic vegetation remains in the middle portion of the lake. The area adjacent to the aquatic vegetation shows signs of agricultural activity, particularly to the east, south, and west. A large distance appears between the aquatic vegetation and New County 18. The marsh has been replaced with plowed fields.

Drainage out is not the only alteration of the natural state of Willis Lake. Two tile lines were installed to drain adjacent fields into the Willis Lake basin. Strohl Testimony. Until 1973, drainage out was the only alteration with a visible impact on the condition of Willis Lake. The DNR took action in 1973 to correct the impact of the drainage by plugging the tile line with concrete. This action succeeded in retaining the water that

had been flowing down to the sump pump near the shore of Lake Elysian. Plugging the tile did not restore the natural outlet of Willis Lake to its pre-1927 level. Lacking the ability to flow out of the basin at its natural level to supply the adjacent marsh, Willis Lake exhibited water levels that increased from nearly dry in 1966 to nearly ten feet deep (1026.6) in 1993. This water level is near the artificial outlet level of 1027.3 (the top of Old County 18) that was found by the 1993 DNR survey and 2.9 feet above the OHWL as determined then by the DNR.

The DNR survey team assumed in the 1993 OHWL determination that the only alteration to Willis Lake as it existed naturally was the tile drainage. The Department then assumed that upon plugging the drainage tile, the water would rise to its OHWL. Evidence of such a reversion usually develops within a twenty-year period. Scherek Testimony. Taking the assumptions of the DNR survey team and the resulting water level, the OHWL was determined to be 1023.7. To be consistent with the rest of the theory, concerning the growth of trees in the interim, Scherek maintained that the water levels must have been sufficiently high between 1938 and 1977 to prevent tree growth between the line of trees used to set the OHWL at 1023.7 and the (lower) stains on the landscape shown in the 1938 photo. *Id.* There is no evidence in the record of this matter to support that belief. To the contrary, regular reports of the DNR on the condition of the lake show that the water level of Willis Lake while the tile was operating was well below 1023.7. Since the theory behind using the tree line used in 1993 to set the OHWL at 1023.7 does not fit the facts, it is concluded that the OHWL determination advanced by the DNR is open to serious question. While it may be an OHWL resulting from the Department's plugging of the tile line, it is not necessarily the OHWL set by nature.

The DNR survey concluded that Willis Lake was landlocked and that the southeast tree evidence was appropriate for determining the OHWL. Joint Exhibit 9. The DNR guidelines for determining OHWL for "disturbed or drained wetlands" set out the following standard:

For basins that have been totally disturbed or drained and no physical evidence remains, the OHWL may be determined using aerial photographs of past conditions. If the vegetation boundaries that are evident on aerial photos can be accurately relocated with a ground survey using fixed objects that still exist, then the average elevation at the survey points is the OHWL.

DNR Exhibit 59, at 6.

Since the location of the southeast tree line has not moved and the water level has not been shown to have been near the base of the trees prior to 1973, it is concluded that the DNR lacks "appropriate tree evidence" upon which to arrive at an OHWL for Willis Lake, as it existed in its natural state. DNR Exhibit 59, at 2. Since Scherek relied solely upon the tree evidence and the outlet level he could observe in 1993, and did not consider the effect of topographical changes on the natural outlet for Willis Lake, it can be inferred that the wrong standard was used to calculate the OHWL.

in 1993. The only other evidence cited by the Department is a soil survey from 1961 showing that peat and muck occupied some of the ground between the stain lines and the higher elevations surrounding the stain lines. DNR Exhibit 61.

When asked at the hearing why the southern tree evidence in the 1938 aerial photograph was not used to calculate the OHWL, Scherek replied that those southern trees are now gone and therefore the location and species of those trees cannot be determined. Scherek Testimony. The record demonstrates that Willis Lake was a “disturbed or drained wetland” within the meaning of the DNR guidelines, and that it is appropriate to use standards other than the currently existing tree evidence for measurement of the OHWL. DNR Exhibit 59, at 6.

The DNR guidelines identify a number of information sources to support a determination of OHWL for disturbed or drained wetlands. These sources include water level records, artificial and natural drainage patterns into and out of the basin, aerial photographs, and testimony by eyewitnesses to historical water conditions. *Id.* The DNR survey report considered the history of drainage, but did not consider historical alteration of natural outlet conditions in concluding that Willis Lake “was essentially landlocked in 1966 and is presently landlocked.” Joint Exhibit 9.

Aerial Photographs

The earliest photographic evidence of the level of Willis Lake is in the 1938 photograph. The photograph shows trees adjacent to a stain line following what appears to be a contour in the basin. The photograph was taken 19 years after the tiling was installed. As the DNR has maintained, however, tiling is not completely efficient in removing water from a basin. Scherek Testimony. In particular, water frozen in the tile over the winter will prevent drainage through the tile until that tile thaws. Therefore, the basin is likely to retain the initial water from the spring thaw and drain that water over a period of time, particularly after that tile finally thaws out. It is concluded that this results in a continuing mark upon the land in approximately the same location as the original shoreline, prior to the installation of any tile system. The presence of trees and other terrestrial vegetation following that stain line is consistent with that contour being the OHWL of Willis Lake, as it existed naturally, even prior to construction of the tile line in 1919.

Recollections of Lake Levels

If a lake has been altered over time, recollections of long-time residents of water levels can provide evidence useful in arriving at the OHWL. DNR Exhibit 59, at 6. Verona Blasing, 71 years of age and a life-long resident of the area, related her knowledge of lake levels and the work done to alter the water levels of the area. She recounted the following:

Several times in the '60s and '70s Lake Willis was lowered. My husband insisted the lowering was due to the old system of tile under the County Road and pumping by Mr. Charles Born on the east side of the County

Road. My husband's oldest brother Lester told of helping install the concrete tile in his youth. He died 6 years ago at age 87.

It is evident that this drainage tile system could not have afforded natural drainage since Mr. Born has to install a pump system to move water on the east side of the road up into Lake Elysian. Further the County installed added metal culvert under the cattle pass in 1972 county road construction. We could observe the pumping system from our bedroom as to when the lights went down on the Lake Elysian area. In the mid 70's Mr. Born installed an irrigation system to pump water from Lake Elysian for his acreage east of Co. Road 18 during dry years. My husband came in one day stating he'd gone into the area across the road near County Road 18 and found out Mr. Born used metal barrel covers between tile to control the area he wished to pump including Lake Willis tile.

Public Exhibit 1.

Joe Strohl, 93 years of age and a resident of the area since his teens, testified extensively as to what conditions were present when tile was laid in Willis Lake in 1919. Strohl related that the tile was laid in the lake bed for some yards and followed the natural line of drainage toward the culvert in Old County 18 and down the streambed through the marsh toward the sump pump beside Lake Elysian. The Department suggests that the drainage could have been ditching done by the landowners prior to 1919. The Department introduced no evidence to support its assertion that ditching was present at that time. Whether, prior to 1919, ditching occurred to create an outlet from a landlocked lake or whether such ditching occurred to improve a natural watercourse are issues upon which the Department has taken conflicting positions. Born Exhibit 10. As discussed above, the 1854 map shows a marsh that must have received water from Willis Lake. The Administrative Law Judge declines to speculate as to whether farmers might have created a ditch or "amplified" a natural waterway in the area before 1919.

Determining Natural OHWL, Appropriate Outlet Level

Applying the methodology of the DNR guidelines for disturbed and drained wetlands, the evidence from the 1938 aerial photograph can be used to determine the OHWL of Willis Lake. The distances can be determined by comparison to fixed objects shown in the photograph. Elevations can be shot at those distances, even under water. The only reasons for not having followed this method in the first instance are the assumptions incorrectly relied upon by the DNR survey team. The objection raised to the tree evidence of the 1938 photograph, that the species cannot be determined, is irrelevant, since the stain line indicates the OHWL. The tree evidence is only significant to show that the area it occupied is at a higher elevation than the stain line and remained dry for sufficient time to allow terrestrial vegetation to grow. The only other evidence cited by the Department is the soil composition of the basin and that evidence is not conclusive as to an exact border between aquatic and terrestrial vegetation. It is concluded that to determine the correct natural OHWL, the elevation of the stain line in the 1938 photograph should be determined.

The permit application requested lowering the opening of the outlet pipe installed in 1993 to 1016.5. The reason for the permit denial was that Willis Lake was landlocked and the most the lake level could be lowered was 1.5 feet below the OHWL by operation of rule. As discussed above, Willis Lake was not landlocked in a state of nature and the 1.5 foot limitation does not apply. Therefore, the application must be considered in light of the standards in Minn. Rule 6115.0221A for lakes with a natural outlet and facilities not being maintained by the DNR.

The first standard is the setting of the OHWL. Minn. Rule 6115.0221A(1) The second standard is establishing facilities "reasonably consistent with natural conditions." Minn. Rule 6115.0221A(2). Where an outlet existed in the state of nature, establishing an outlet at essentially the same control elevation meets the standard. *Id.* The third standard is the responsibility for the establishment and maintenance of the outlet. Minn. Rule 6115.0221A(3). The fourth standard is justifying the need for the outlet in light of both public and private interests. Minn. Rule 6115.0221A(4). The fifth standard is the plan for operation of the control facility. Minn. Rule 6115.0221A(5).

The first standard is met by setting the OHWL through this proceeding. The second standard is met by setting the control outlet to the level determined by a survey conducted to determine the shoreline elevation evidenced by the stain shown on the 1938 aerial photo. The third and fifth standards are met by the existing responsibility, maintenance, and operation standards in place for the outlet pipe that is installed on the eastern end of Willis Lake.

Regarding the fourth standard, the DNR has used the lake as a fish spawning ground. That use is not likely to continue if significant aquatic vegetation spreads across Willis Lake. That aquatic vegetation would provide habitat for waterfowl and muskrats, as existed in the 1950s and 1960s. See Public Testimony of Numerous Witnesses. The DNR's use for the lake has been sporadic and can be replicated in other lakes. It is reasonable to conclude that the re-establishment of waterfowl and muskrat habitat by returning Willis Lake to its natural state outweighs maintaining the lake as an occasional spawning area. This is sufficient justification to approve the installation of a water level control structure (the existing outlet pipe, cut to the appropriate level, and removal or lowering of the 1973 dam to the same level if necessary) set at the elevation surveyed in accordance with the above Recommendation.

Some of the general standards found at Minn. Rule 6115.0220, subparts 2 to 5, apply as well. Subpart 3 prohibits construction of control facilities intended to manipulate water levels solely to satisfy private interests. Assuming a return to natural conditions is "manipulative", the standard is still met because the evidence is strong that the public would be better served if Willis Lake is returned to nature as a duck and muskrat habitat. Regarding subpart 5, its requirements are met because the recommended action encroaches minimally on wild life habitat (it likely will improve it), there will be no adverse effect on the biological character of water (water quality is likely to improve, given the filtration properties of marshland), and a restoration to natural conditions is likely to help prevent sedimentation in Lake Elysian, improve water supply,

and maintain or improve habitat for wild life species. See Minn. Rule 6115.0220, subpart 5F. All applicable standards of part 6115.0220 are met if the recommended action is followed.

With regard to the general environmental statutes, in order to invoke their protections, it must first be shown that natural resources will be "polluted, impaired, or destroyed". Minn. Stat. § 116B.02, subd. 5. Willis Lake has been used as spawning habitat by the DNR, but this does not outweigh a return to natural conditions when such a return will afford improved habitat for ducks and muskrats. As discussed in the foregoing paragraph, natural resources of wildlife and water quality are likely to be enhanced by granting the permit, with appropriate modifications. Reduction of the lake's water level to the OHWL does not, under the facts present in this matter, constitute pollution, impairment or destruction and does not "materially adversely affect the environment." *Id.* The restrictions in Minn. Stat. Chap. 116B do not apply in this matter.

The Department maintains that Minn. Stat. § 103G.245 prohibits the granting of the application in this matter. The statute prohibits changing the level of public waters, with certain exceptions that are not applicable here. Minn. Stat. § 103G.245, subd. 10. The statute prohibits setting the outlet at 1016.5, absent a showing that the water elevation that would result is the same as the OHWL of Willis Lake. That OHWL will be based on the 1938 photographic evidence. Any drainage of water that results in a water level lower than the elevation of the 1938 stain line is drainage of public waters and prohibited by Minn. Stat. § 103G.245. Since the natural OHWL is at the stain line shown in the 1938 photograph, and the current water level is well above the elevation of that stain line, there is no statutory prohibition against the granting of a modified permit. The definition of "public waters" includes meandered lakes. Minn. Stat. § 103G.005, subd. 15(a)(3). "Ordinary High Water Level" means the boundary of . . . public waters" *Id.* at subd. 14. The establishing of the OHWL by reference to the 1938 photograph establishes the outlet at the water level over which the Department has jurisdiction. Any water drained to the level of the stain line is therefore not a "public water" within the meaning and intent of Minn. Stat. § 103G.245, so the statute does not apply to the result recommended by this Report. To require the water level to remain above the level shown by the staining on the 1938 photograph would subject land not under the jurisdiction of the Department to the orders of the Department. The Department lacks the statutory authority to require retention of a water level above the OHWL of public waters.

The Department maintains that the Applicant must show the action requested in the application complies with the appropriate standards and no other relief can be granted. Thus, since the Applicant did not show that a reduction to 1016.5 is appropriate, the permit must be denied. Minn. Stat. § 103G.315, subd. 4, authorizes the Commissioner to set control levels where those levels are at issue. Subdivision 5 of the statute authorizes the Commissioner to modify the plan proposed in the application, consistent with protecting the public interest. The Commissioner is authorized by statute to grant a permit modified from the action requested in the application. The

standards for such modification have been met in this matter. Therefore, the Applicant's inability to establish 1016.5 as the appropriate outlet for Willis Lake is not a basis for denial of a permit in this matter.

The Administrative Law Judge understands, after visiting the Willis Lake area with the parties, how a survey team could conclude that what one sees now is the lake in its natural condition. However, the factual record demonstrates that the mature trees to the southeast of Willis Lake should not be used as evidence to determine the natural OHWL. To make that determination, it is more appropriate to use aerial photographic evidence of water stains shown on the 1938 photograph. Those stains are "water-formed evidence" in accordance with the Department's "Guidelines for Ordinary High Water Level Determinations" (DNR Ex. 59). The use of such water-formed evidence to determine the OHWL will lower the water level in Willis Lake by some degree and is likely to return the lake to conditions suitable for duck and muskrat habitat.

Establishing the outlet elevation at the same level as the 1938 stain lines may not reduce the water level in Willis Lake to the OHWL that existed naturally for the lake. The inefficiency of the outlet pipe in moving water may well result in water levels above the OHWL as shown in the 1938 photograph. However, there is no basis in this record to determine what level of outlet would result in the OHWL as shown in the 1938 photograph. Reducing the outlet to the level shown in the 1938 photograph will, over time, result in the establishing of a standard for any further reduction in outlet level that may be required to reestablish Willis Lake to essentially the state of nature. Any other change in the level of Willis Lake should await observation of the conditions established by lowering the outlet level to match the appropriate, natural OHWL.

RCL